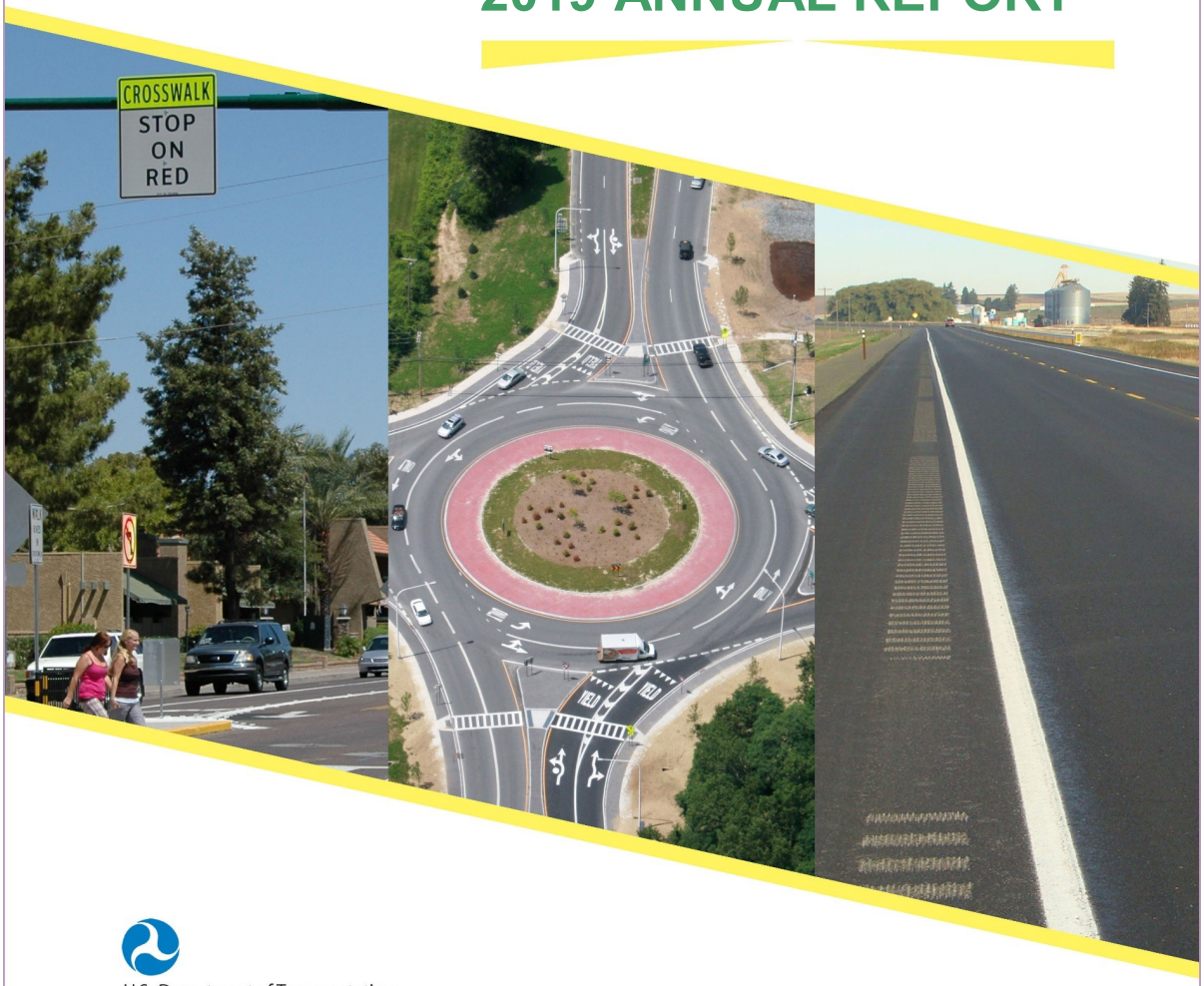
SOUTH CAROLINA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2019 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

Table of Contents

Disclaimer

Protection of Data from Discovery Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

In 2005, the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established the Highway Safety Improvement Program as a core Federal-aid program with the goal of achieving a signification reduction in fatalities and serious injuries on all public roads under Section 148, Title 23 of the United States Code (23 USC 148). The program has continued through the enactment of the Moving Ahead for Progress in the 21st Century Act (MAP-21) in 2012 and the Fixing America's Surface Transportation Act (FAST Act) in 2015.

The Highway Safety Improvement Program (HSIP) emphasizes a data-driven, performance-based strategic approach to improving highway safety, through the development and implementation of a Strategic Highway Safety Plan (SHSP), a comprehensive plan that establishes statewide highway safety goals, objectives, and key emphasis areas intended to drive HSIP investment decisions.

This report provides an overview of SCDOT's administration of the Highway Safety Improvement Program (HSIP). SCDOT's HSIP has a primary focus on state-maintained roads since nearly 96 percent of fatal crashes and the vast majority of severe crashes occur on the state system. This report covers funding obligations from January 1, 2018 to December 31, 2018

Introduction

The Highway Safety Improvement Program (HSIP) is a core Federal-aid program with the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. As per 23 U.S.C. 148(h) and 23 CFR 924.15, States are required to report annually on the progress being made to advance HSIP implementation and evaluation efforts. The format of this report is consistent with the HSIP Reporting Guidance dated December 29, 2016 and consists of five sections: program structure, progress in implementing highway safety improvement projects, progress in achieving safety outcomes and performance targets, effectiveness of the improvements and compliance assessment.

Program Structure

Program Administration

Describe the general structure of the HSIP in the State.

The Highway Safety Improvement Program is implemented through the Traffic Engineering-Traffic Safety Office. This office is composed of five groups: Highway Safety Improvement Program, Railroad/Research, Safety Program Administration, Safety Project Development, and Strategic Highway Safety Plan/Special Projects. The HSIP group is responsible for all aspects of the HSIP process: planning, implementation, and evaluation.

HSIP funding is currently allocated to align with crash categories and emphasis areas from the Strategic Highway Safety Plan (SHSP). The funding for these Emphasis area is as follows with some overlap between categories:

- Roadway Departure ($20 Million)

- Interstate Safety Program ($11M)
- Rumble Strip Program ($9M)

- Intersections and Other High Risk Locations ($18 Million)
    - Intersection Safety Program ($13M)
    - Road Safety Assessments Program ($5M)
- Non-Motorized Users ($5 Milliion)

Where is HSIP staff located within the State DOT?

Engineering

How are HSIP funds allocated in a State?

- Other-Central Office through Statewide Screening Process

Describe how local and tribal roads are addressed as part of HSIP.

In South Carolina, the vast majority (~96%) of fatal crashes occur on state-maintained roadways. Due to this statistic, our primary focus for safety has been on state-maintained roadways. However, we have some intersection improvement projects where a local road intersects with a state-owned road. Additionally, as our crash data is improving in accessibility and completeness, local roads are being incorporated into our Road Inventory Management System (RIMS) for analysis.

It is also worth noting that South Carolina maintains the fourth largest highway system in the nation at nearly 41,400 center-line miles of roadway, despite a land area of roughly 32,000 square miles.

Identify which internal partners (e.g., State departments of transportation (DOTs) Bureaus, Divisions) are involved with HSIP planning.

- Design
- Districts/Regions
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

Several partners within SCDOT and consultants are involved thoughout the process of HSIP planning. Many of our safety improvements are designed by our Safety Project group within Traffic Engineering and they are involved with project design or oversight on all projects to ensure proper designs. Our Planning office is consulted during the selection process to determine if any qualifying projects have been identified for improvements through other funding sources such as the Metropolitan Planning Organizations (MPOs) or Council of Governments (COGs). Our Maintenance office is also contacted to ensure that there are no conflicting maintenance activities such as resurfacing or pavement marking contracts that involve overlapping work. Operations are monitored through other Traffic Engineering offices or consultants to ensure that all projects include consideration of proper traffic operations by conducting traffic volume counts, Synchro analysis, signal operations, etc.

Identify which external partners are involved with HSIP planning.

- Governors Highway Safety Office
- Law Enforcement Agency
- Local Government Agency
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)

Describe coordination with external partners.

SCDOT has partnered with the SC Department of Public Service to fund a Target Zero enforcement initiative. Through this partnership, a specialized enforcement team comprised of 24 Highway Patrol Troopers has been deployed to focus their full time efforts to the enforcement of traffic laws along high crash corridors in the states. The corridors were identified based upon crashes that involved an impaired driver, speeding or unrestrained motor vehicle occupants.

The SCDOT Traffic Engineering Safety Office also provides annual reports on MPO/COG specific crash statistics, and location specific crash summaries and analyses as needed. Additionally, SCDOT will often partner with MPOs, COGs and LGAs to ensure safety improvements are included in projects.

The Traffic Safety office conducts safety data workshops with MPO's and COGs on a biennial basis.

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?

No

SCDOT is in the process of developing an HSIP manual. The publication date is not currently set. SCDOT does have engineering directives that outline the project selection/ranking process.

Select the programs that are administered under the HSIP.

- Other-Safety Program

Program: Other-Safety Program

Date of Program Methodology:10/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes Fatal crashes only Fatal and serious injury crashes only	Traffic Volume Lane miles	Median width Functional classification

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Equivalent property damage only (EPDO Crash frequency)
- Excess expected crash frequency using SPFs
- Other-Crash Density
- Relative severity index

Are local roads (non-state owned and operated) included or addressed in this program?

Yes

Are local road projects identified using the same methodology as state roads?

Yes

How are projects under this program advanced for implementation?

- selection committee

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C:3
Available funding:2
Ranking based on net benefit:3
Cost Effectiveness:1

What percentage of HSIP funds address systemic improvements?

40

HSIP funds are used to address which of the following systemic improvements?

- Add/Upgrade/Modify/Remove Traffic Signal
- Cable Median Barriers
- Clear Zone Improvements
- High friction surface treatment
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge
- Upgrade Guard Rails

What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- Road Safety Assessment

Does the State HSIP consider connected vehicles and ITS technologies?
No

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

Predictive and alternative Analysis for select projects.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

Enter the programmed and obligated funding for each applicable funding category.

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$30,058,530	$40,469,042	134.63%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$0	$887,839	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$2,091,129	0%
State and Local Funds	$2,262,470	$2,437,347	107.73%
Totals	$32,321,000	$45,885,357	141.97%

How much funding is programmed to local (non-state owned and operated) or tribal safety projects?

$0

How much funding is obligated to local or tribal safety projects?

$0

How much funding is programmed to non-infrastructure safety projects?

$0

How much funding is obligated to non-infrastructure safety projects?

$0

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

$0

How much funding was transferred out of the HSIP to other core program areas during the reporting period under 23 U.S.C. 126?

$0

Discuss impediments to obligating HSIP funds and plans to overcome this challenge in the future.

None

General Listing of Projects

List the projects obligated using HSIP funds for the reporting period.

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
2018 Rumble Stripes District 1	Roadway	Rumble strips - unspecified or other	130	Miles	$1056236.79	$1056236.79	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 2	Roadway	Rumble strips - unspecified or other	291	Miles	$1869549.65	$1869549.65	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 3	Roadway	Rumble strips - unspecified or other	95	Miles	$1715800.08	$1715800.08	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 4	Roadway	Rumble strips - unspecified or other	263	Miles	$1724852.14	$1724852.14	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 5	Roadway	Rumble strips - unspecified or other	81	Miles	$1469322.48	$1469322.48	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 6	Roadway	Rumble strips - unspecified or other	59	Miles	$1100951.88	$1100951.88	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Rumble Stripes District 7	Roadway	Rumble strips - unspecified or other	232	Miles	$1089272.05	$1089272.05	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
2018 Safety Program Administration	Non-infrastructure	Transportation safety planning		Non-infrastructure	$1260000	$1400000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Administration	
CHARLESTON SAFETY SIGNAL UPGRADES	Intersection traffic control	Intersection traffic control - other		Intersections	$31684.92	$31684.92	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - S-112 (N. Ebenezer Rd/Pisgah Rd) at S-193 (N. Ebenezer Rd/ W. Sumter)	Intersection geometry	Intersection geometry - other		Intersections	$101970	$113300	HSIP (23 U.S.C. 148)	Rural	Minor Collector	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - S-145 (Pine Log) at S-65 (Storm Branch)	Intersection geometry	Intersection geometry - other		Intersections	$1584478.05	$1584478.05	HSIP (23 U.S.C. 148)	Rural	Minor Collector	0		State Highway Agency	Spot	Intersections	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Intersection Improvements - S-920 (Old Rutherford Rd) at Old Greer Town Road	Intersection geometry	Intersection geometry - other		Intersections	$480080.85	$533423.17	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - SC 555 (Farrow Rd) and S-1274 (N Brickyard Rd)	Intersection geometry	Intersection geometry - other		Intersections	$33480	$37200	HSIP (23 U.S.C. 148)	Urban	Major Collector	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - US 15 (S. Marquis Hwy) @ S-135 (Railroad Ave) 1.5 mi E of Hartsville	Intersection geometry	Intersection geometry - other		Intersections	$99390.72	$110434.14	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - US 17 Bypass at 76th Avenue N	Intersection geometry	Intersection geometry - other		Intersections	$58446.49	$64940.54	HSIP (23 U.S.C. 148)	Urban	Major Collector	0		State Highway Agency	Spot	Intersections	
Intersection Improvements - US 521 (Charlotte Hwy) & S-755 (North Corner Road)	Intersection geometry	Intersection geometry - other		Intersections	$285459.84	$317177.6	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
Interstate Safety Project I-77 MP 5.20 – MP 6.40 Overhead Sign Structure with Weather Monitoring	Roadway signs and traffic control	Roadway signs and traffic control - other	1.2	Miles	$809315.11	$809315.11	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	0		State Highway Agency	Spot	Roadway Departure	
S-356 (Starline Drive)	Roadway	Roadway - other	2.53	Miles	$951265.99	$1057687.79	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	600		State Highway Agency	Spot	Roadway Departure	
S-367 (Beason Road)	Roadway	Roadway - other	3.38	Miles	$729196.34	$810218.15	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,100		State Highway Agency	Spot	Roadway Departure	
S-60 (Short Cut Rd)	Roadway	Roadway - other	3.76	Miles	$1339288.51	$1488098.35	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,800		State Highway Agency	Spot	Roadway Departure	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Section/Corridor Improvements - S-12 (Kelleytown Rd.) MP 1.64 to MP 3.84	Roadway	Roadway - other	2.2	Miles	$399389.18	$443765.76	HSIP (23 U.S.C. 148)	Rural	Major Collector	2,500		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-132 (Old Hunts Bridge Rd) MP 0.00 to MP 3.96	Roadway	Roadway - other	3.96	Miles	$768045.82	$853384.24	HSIP (23 U.S.C. 148)	Rural	Major Collector	850		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-14 (West/East Billy Farrow Hwy) MP 1.45 to MP 10.08	Roadway	Roadway - other	8.6	Miles	$655699.04	$728554.49	HSIP (23 U.S.C. 148)	Rural	Major Collector	2,800		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-159 (Garrison Rd) MP 0.00 to MP 2.64	Roadway	Roadway - other	2.64	Miles	$660198.19	$733553.54	HSIP (23 U.S.C. 148)	Rural	Major Collector	2,000		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-198 - MP 0.00 to MP 0.41 & MP 1.65 to MP 2.95	Roadway	Roadway - other	1.71	Miles	$31131.18	$34590.2	HSIP (23 U.S.C. 148)	Urban	Minor Collector	1,900		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-20 (Ruby Rd) MP 0.00 to MP 4.16	Roadway	Roadway - other	4.16	Miles	$762176.07	$846862.3	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,400		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-23 (Pumphouse Rd) MP 0.00 to MP 1.88	Roadway	Roadway - other	1.88	Miles	$906320.09	$1007022.32	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,300		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-279 (Reid School Rd) MP 2.60 to MP 3.10	Roadway	Roadway - other	0.5	Miles	$67500	$75000	HSIP (23 U.S.C. 148)	Urban	Minor Collector	9,200		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-30 (Pineland	Roadway	Roadway - other	3.97	Miles	$1199958.62	$1333287.36	HSIP (23 U.S.C. 148)	Rural	Minor Collector	450		State Highway Agency	Spot	Roadway Departure	

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
Rd) MP 0.00 to MP 3.97															
Section/Corridor Improvements - S-438 (Greenhouse Rd/Todd Rd) MP 0.00 to MP 2.80	Roadway	Roadway - other	2.8	Miles	$1104865.18	$1227627.98	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	550		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-543 (Fairview St. Ext/Greenpond Rd) MP 1.27 to MP 4.36	Roadway	Roadway - other	3.09	Miles	$681804	$757560.01	HSIP (23 U.S.C. 148)	Rural	Major Collector	3,400		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-604 (Jeter Rd/Rawl Rd) MP 0.00 to MP 4.24	Roadway	Roadway - other	4.24	Miles	$506758.93	$563065.48	HSIP (23 U.S.C. 148)	Urban	Local Road or Street	450		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-89 (Short Cut Rd) MP 0.00 to MP 4.63	Roadway	Roadway - other	4.63	Miles	$1168457.33	$1298285.93	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,250		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - S-906 (Tower Rd/ Baldwin Rd) MP 0.00 to MP 4.23	Roadway	Roadway - other	4.23	Miles	$1700279.7	$1889199.67	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	900		State Highway Agency	Spot	Roadway Departure	
Section/Corridor Improvements - SC 70 (Binnicker Bridge Rd)	Roadway	Roadway - other	2	Miles	$2387394.78	$2652660.86	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,100		State Highway Agency	Spot	Roadway Departure	
Signalize and construct left turn lanes on S-204 (Pisgah Church/Long Pond) and S-77 (Barr Road)	Intersection geometry	Intersection geometry - other		Intersections	$1117072.62	$1241191.79	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Intersections	
Statewide Interstate Safety	Roadside	Removal of roadside objects	34	Miles	$2054502.16	$2282780.17	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0		State Highway Agency	Systemic	Roadway Departure	

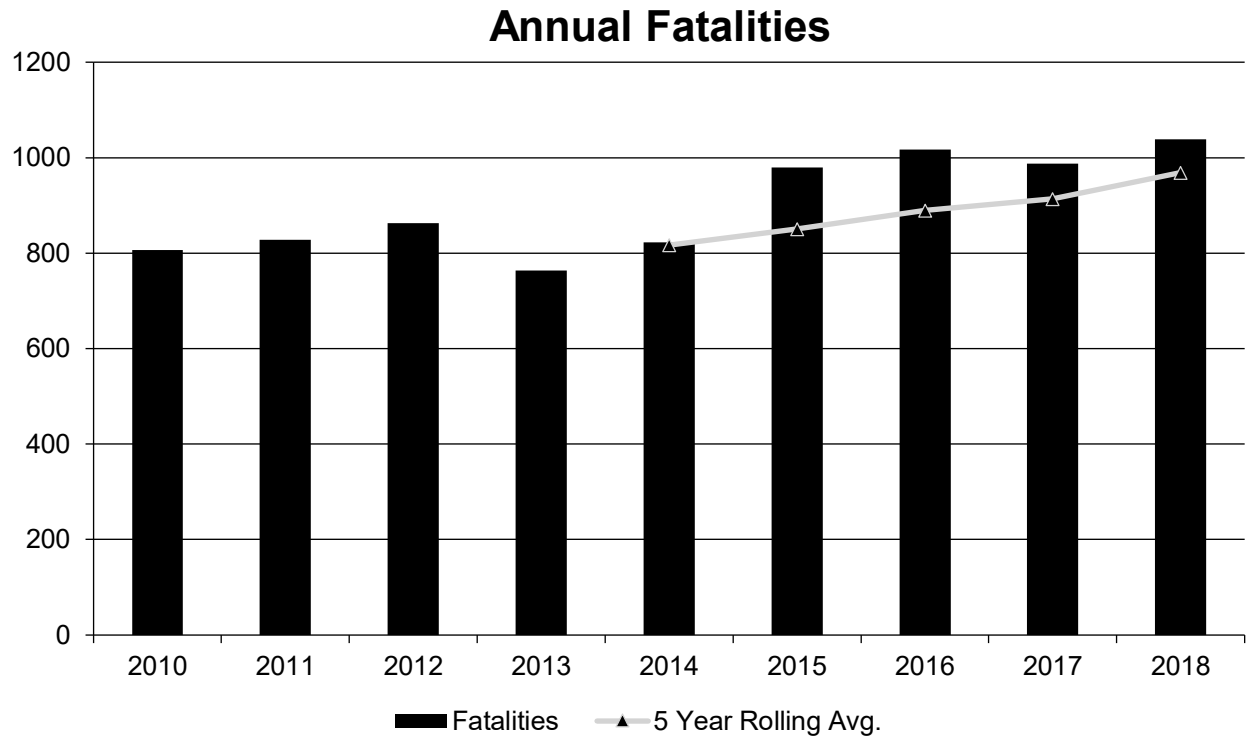
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
- I-95 MP 0.00 to MP 33.90		(trees, poles, etc.)													
Target Zero Campaign TRA-1-15	Non-infrastructure	Outreach		Non-infrastructure	$1403549.47	$1403549.47	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	

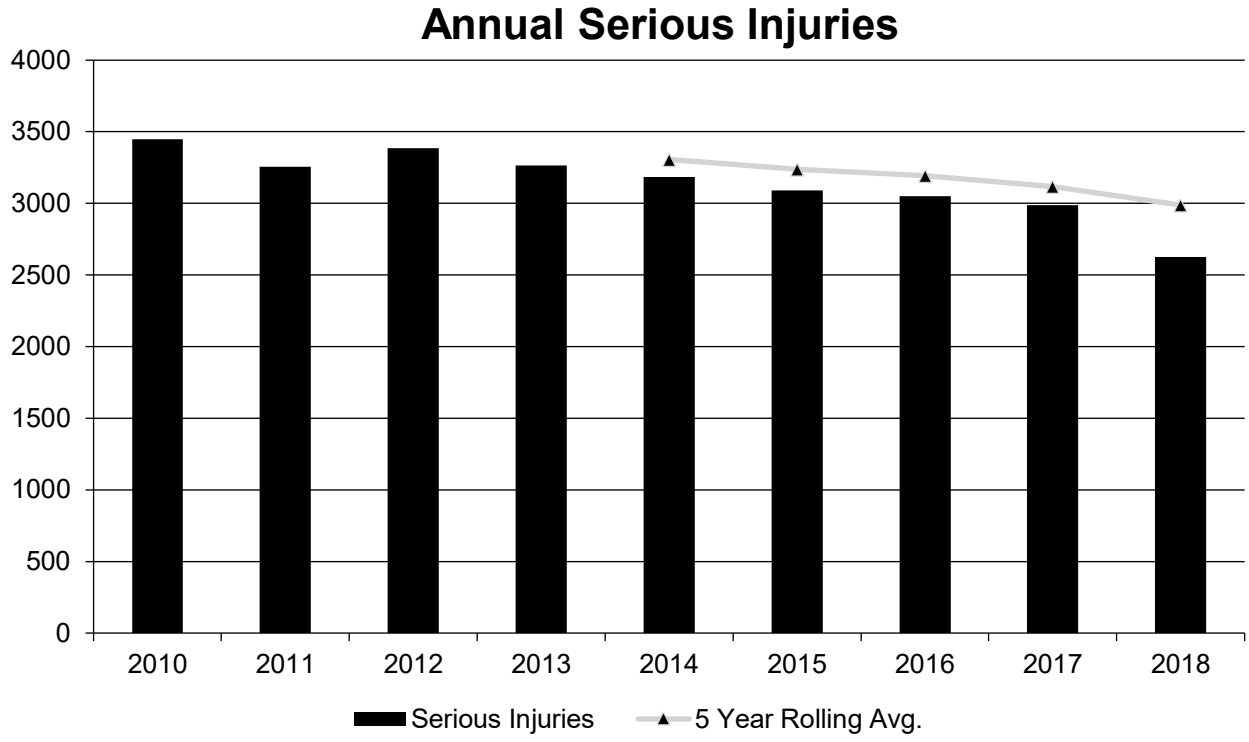
Safety Performance

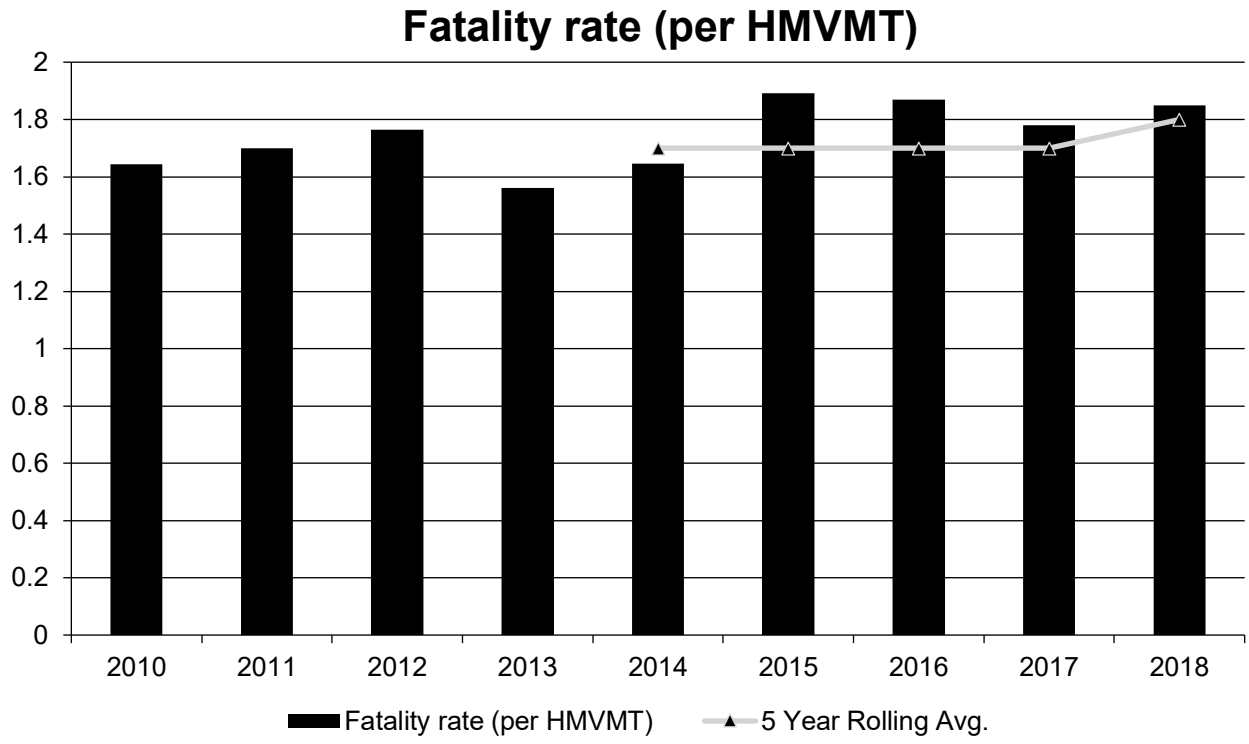
General Highway Safety Trends

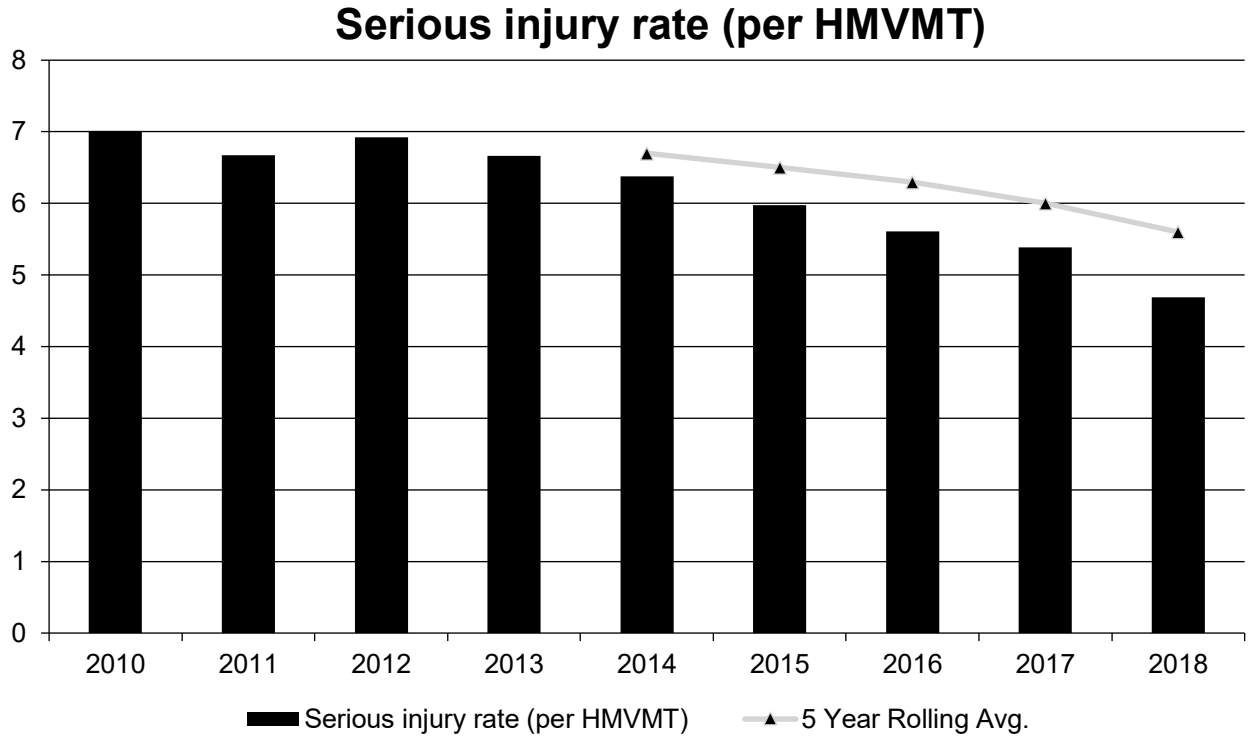
Present data showing the general highway safety trends in the State for the past five years.

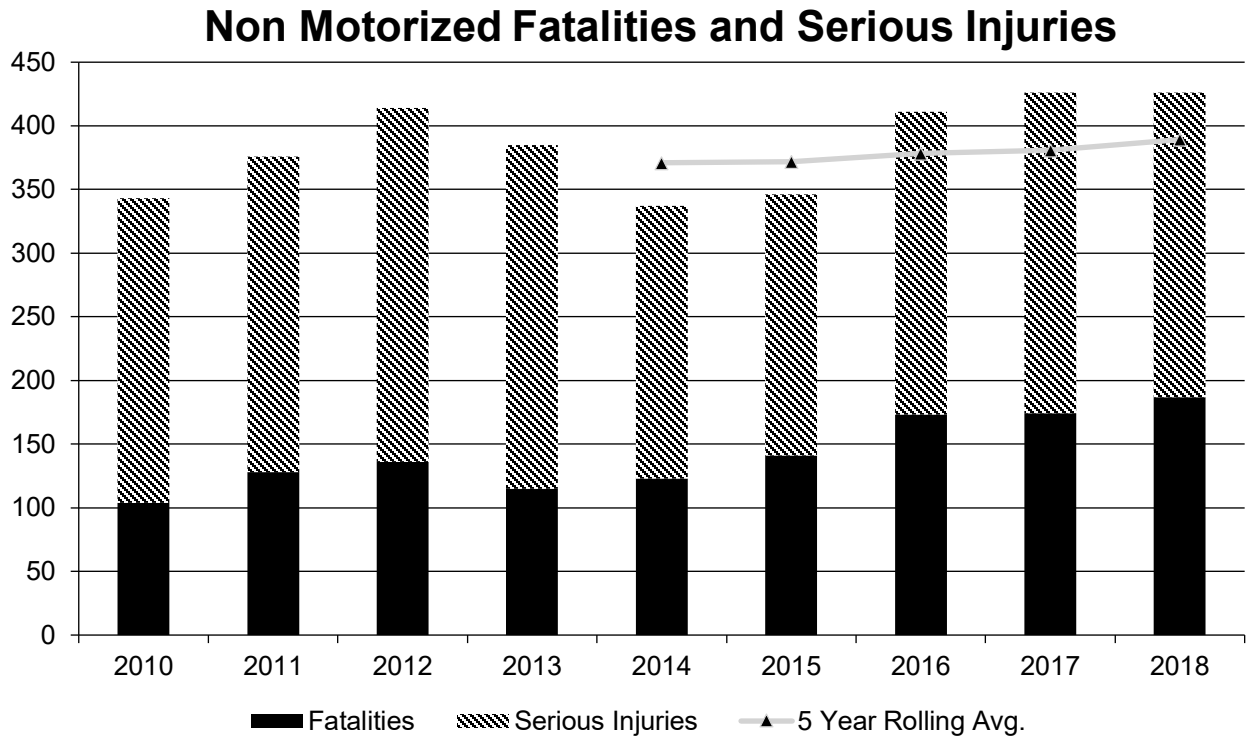
PERFORMANCE MEASURES	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fatalities	807	828	863	764	822	979	1,017	988	1,038
Serious Injuries	3,446	3,254	3,386	3,264	3,185	3,092	3,050	2,988	2,627
Fatality rate (per HMVMT)	1.643	1.699	1.765	1.560	1.646	1.891	1.870	1.780	1.850
Serious injury rate (per HMVMT)	7.015	6.675	6.920	6.663	6.376	5.980	5.610	5.384	4.690
Number non-motorized fatalities	104	128	136	115	123	141	173	174	187
Number of non-motorized serious injuries	239	248	278	270	214	205	238	252	239


Annual Fatalities
1200
1000
800
600
400
200
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
4000
3500
3000
2500
2000
1500
1000
500
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
8
7
6
5
4
3
2
1
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

FARS

To the maximum extent possible, present this data by functional classification and ownership.

Year 2018

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	73	118.6	0.92	1.49
Rural Principal Arterial (RPA) - Other Freeways and Expressways	2.6		1.07	
Rural Principal Arterial (RPA) - Other	80.6	177.4	1.9	4.19
Rural Minor Arterial	114	260.6	2.78	6.39
Rural Minor Collector	104.6	268	3.52	10.25
Rural Major Collector				
Rural Local Road or Street	66.6	189.6	2.22	6.32

Functional Classification	**Number of Fatalities (5-yr avg)**	**Number of Serious Injuries (5-yr avg)**	**Fatality Rate (per HMVMT) (5-yr avg)**	**Serious Injury Rate (per HMVMT) (5-yr avg)**
Urban Principal Arterial (UPA) - Interstate	44.6	110.2	0.59	1.47
Urban Principal Arterial (UPA) - Other Freeways and Expressways	7.6	22.6	1.02	3.04
Urban Principal Arterial (UPA) - Other	151.8	529.4	1.88	6.61
Urban Minor Arterial	109	411	1.58	6
Urban Minor Collector				
Urban Major Collector	71	265.4	1.84	6.89
Urban Local Road or Street	43.8	185.2	1.99	8.48
Unknown				

Year 2016

Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	840.4	2,945.2	1.73	6.08
County Highway Agency				
Town or Township Highway Agency				
City or Municipal Highway Agency				
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency	48.6	250.2	2.32	12.04
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				
Other				

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities:1011.0

Describe the basis for established target, including how it supports SHSP goals.

The target of 1011.0 traffic fatalities was established after thorough analysis of historic data and trend line projections. For this measure, a polynomial order 2 trend analysis was used to determine projected 2019 data, then using this projection the state was able to determine a reasonable target for the five year period ending in 2020. By examining planned projects and current safety initiatives (in the fields of education, enforcement, and engineering), the state was able to calculate an expected decrease in the number of traffic fatalities during calendar year 2020. This target supports the SHSP goal of eliminating traffic fatalities in SC.

Number of Serious Injuries:2781.0

Describe the basis for established target, including how it supports SHSP goals.

A target of 2781.0 serious injuries was established after thorough analysis of historic data and trend line projections. For this measure, a polynomial order 2 trend analysis was used to determine projected 2019 data, then using this projection the state was able to determine a reasonable target for the five year period ending in 2020. By examining planned projects and current safety initiatives (in the fields of education, enforcement, and engineering), the state was able to calculate an expected decrease in serious injuries during calendar year 2020. This target supports the SHSP goal of reducing serious injuries that resulted from a traffic collision.

Fatality Rate:1.819

Describe the basis for established target, including how it supports SHSP goals.

The target of 1.819 as the fatality rate was established by using the projected fatality number in 2020 along with an expected 1% increase in vehicle miles traveled during that year. As part of the SHSP, reducing the fatality rate remains a valuable target for the state.

Serious Injury Rate:4.979

Describe the basis for established target, including how it supports SHSP goals.

The target of 4.979 as the serious injury rate was established by using the projected serious injury number in 2020 along with an expected 1% increase in vehicle miles traveled during that year. As part of the SHSP, reducing the serious injury rate remains a valuable target for the state.

Total Number of Non-Motorized Fatalities and Serious Injuries:380.0

Describe the basis for established target, including how it supports SHSP goals.

The target of 380.0 non-motorized fatalities and serious injuries was established after thorough analysis of historic data and trend line projections. For this measure, a polynomial order 2 trend analysis was used to determine projected 2019 data, then using this projection the state was able to determine a reasonable target for the five year period ending in 2020. By examining planned projects and current safety initiatives (in the fields of education, enforcement, and engineering), the state was able to calculate an expected decrease in fatalities and serious injuries involving pedestrians and bicyclists during calendar year 2020.

Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.

When setting safety performance targets for the state, extensive analysis of the data related to each measure was performed by statisticians from both the State Highway Safety Office, with the SC Department of Public Safety (DPS) and the traffic engineering office with the SC Department of Transportation (DOT). After the data had been thoroughly examined and documented, representatives from each agency, including the State Traffic Safety Engineer from DOT and the Director of the State Highway Safety Office from DPS, meet on two separate occasions to discuss safety initiatives planned for the upcoming years that may counteract the rising number of fatalities in the state.

Agreement was reached between the two agencies on the expected reductions and targets were established.

Staff from the traffic engineering office also met with representatives from the MPO/COGs, delivering a presentation on target setting and how the state's targets were established for this year.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2018 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

The state anticipates meeting four of the five safety performance targets for 2014-2018. The preliminary five year averages for each measure are shown below. The target is shown in parenthesis after each target figure.

Fatalities: 969.6 (970.0)
Fatality Rate: 1.804 (1.810)
Serious Injuries: 2,961.6 (3,067.0)
Serious Injury Rate: 5.545 (5.710)
Non-motorized user fatalities and serious injuries combined: 380.8 (371.0)

The number of non-motorized user fatalities and serious injuries combined is the only target the state does not anticipate meeting.

Applicability of Special Rules

Does the HRRR special rule apply to the State for this reporting period?

No

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018
Number of Older Driver and Pedestrian Fatalities	106	83	100	109	113	127	159

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018
Number of Older Driver and Pedestrian Serious Injuries	239	234	211	224	222	214	263

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio

Based on the measures of effectiveness selected previously, describe the results of the State's program level evaluations.

Selected projects have produced an average B/C ratio of 2.72

What other indicators of success does the State use to demonstrate effectiveness and success of the Highway Safety Improvement Program?

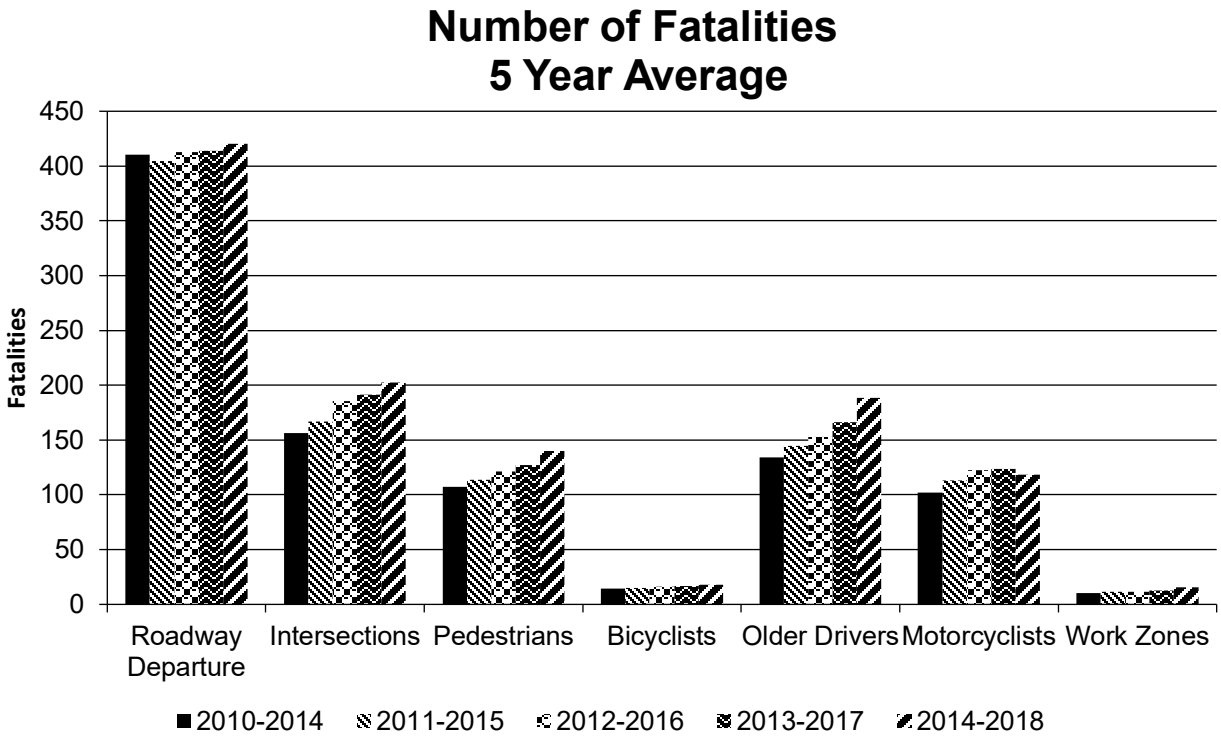
- Increased awareness of safety and data-driven process
- Other-Increased use of alternative intersections statewide
- Other-DDSA draft report

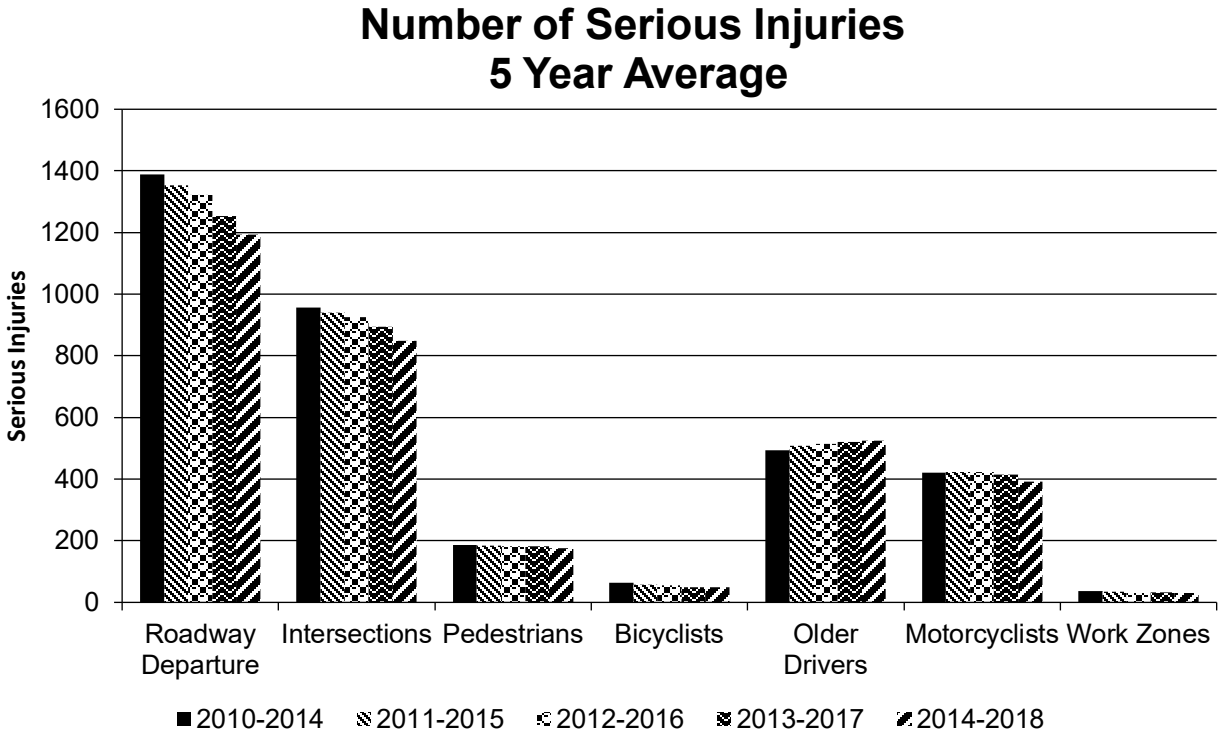
Effectiveness of Groupings or Similar Types of Improvements

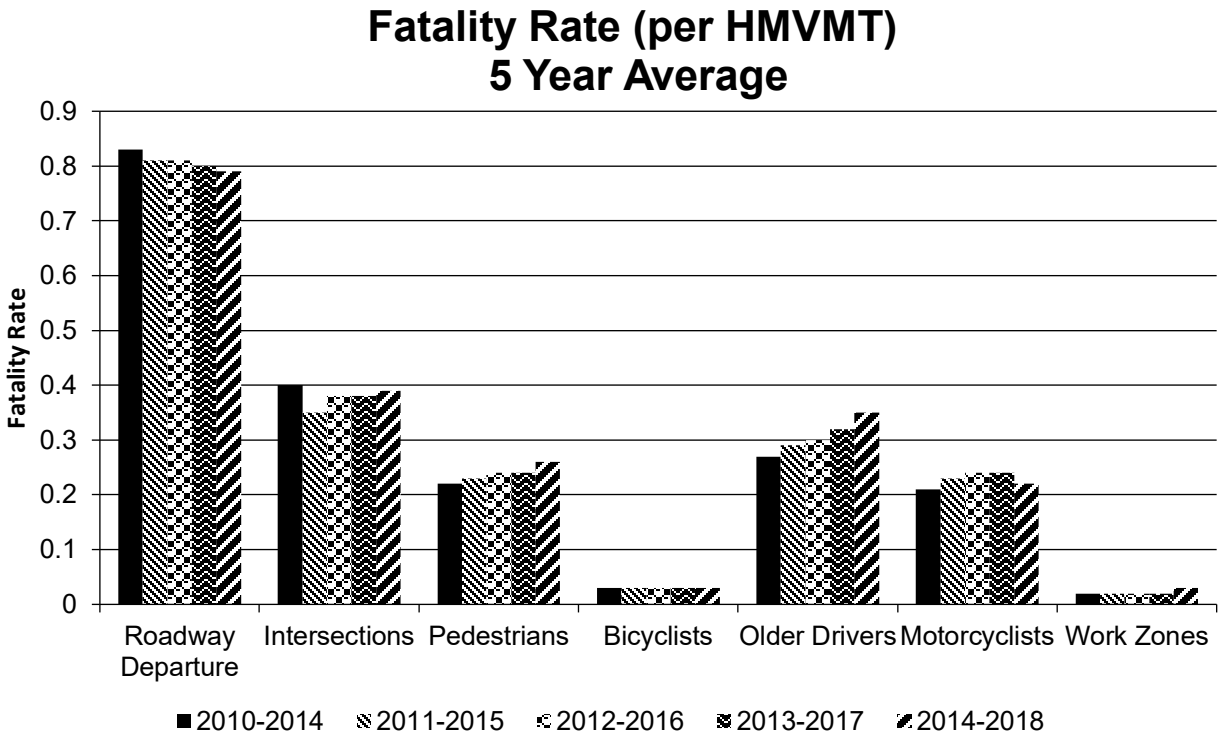
Present and describe trends in SHSP emphasis area performance measures.

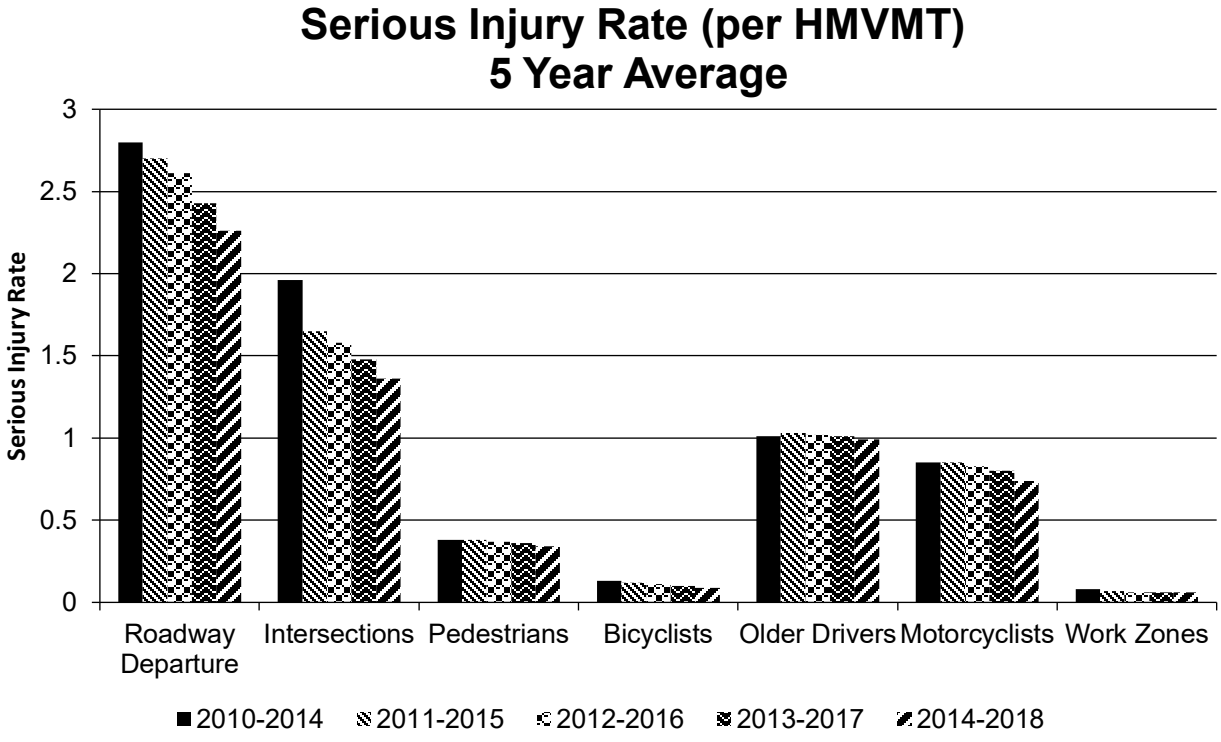
Year 2018

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure		420.6	1,194.2	0.79	2.26
Intersections		202.2	847.8	0.39	1.36
Pedestrians		140.2	175.2	0.26	0.34
Bicyclists		17.8	50.2	0.03	0.09
Older Drivers		188.2	525.6	0.35	0.99
Motorcyclists		118.2	392.2	0.22	0.74
Work Zones		15.4	30	0.03	0.06


Number of Fatalities
5 Year Average
Fatalities
450
400
350
300
250
200
150
100
50
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018


Number of Serious Injuries
5 Year Average
Serious Injuries
1600
1400
1200
1000
800
600
400
200
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018





Has the State completed any countermeasure effectiveness evaluations during the reporting period?

No

Project Effectiveness

Provide the following information for previously implemented projects that the State evaluated this reporting period.

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
US 178 & S-64 Pickens County	Rural Major Collector	Intersection geometry	Intersection geometry - other	7.00	6.00	1.00				6.00		14.00	6.00	18.95
US 52 & S-37 Berkeley County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add right-turn lane	38.00	26.00			1.00		8.00	13.00	47.00	39.00	1.82
S-70 & S-77 Lexington County	Rural Major Collector	Intersection geometry	Intersection geometrics - modify skew angle	7.00	1.00					2.00	1.00	9.00	2.00	.63
SC 19 & S-503 Aiken County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	9.00						4.00	2.00	13.00	2.00	1.18
US 321 & S-663 Lexington County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	8.00	10.00			6.00			3.00	14.00	13.00	.42
SC 8 & S-485 Anderson County	Rural Major Collector	Intersection geometry	Intersection geometrics - modify skew angle	11.00	9.00			1.00		4.00		16.00	9.00	2.41
SC 252 & S-203 Anderson County	Rural Major Collector	Intersection geometry	Intersection geometrics - modify skew angle	6.00								6.00		.16
SC 120 & S-528 Sumter County	Rural Major Collector	Intersection geometry	Intersection geometry - other	6.00	1.00					5.00	1.00	11.00	2.00	1.26
S-22 & S-35 Dorchester County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	13.00	14.00					2.00	6.00	15.00	20.00	-.11
SC 290 & S-171 Greenville County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	29.00	27.00					7.00	6.00	36.00	33.00	.56
S-50 & S-1912 Greenville County	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	34.00	10.00					8.00	4.00	42.00	14.00	2.52
SC 291 & S-7 Greenville County	Rural Major Collector	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	7.00	15.00		1.00	2.00		14.00	6.00	23.00	22.00	1

2019 South Carolina Highway Safety Improvement Program

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
I 85 & US 178 Anderson County	Rural Major Collector	Intersection geometry	Intersection geometry - other	20.00	6.00					1.00	1.00	21.00	7.00	.94
S-354 Darlington County	Rural Major Collector	Shoulder treatments	Widen shoulder - paved or other	24.00	32.00		1.00	2.00	1.00	12.00	17.00	38.00	51.00	-3.54
US 521 Sumter County	Rural Major Collector	Roadway	Rumble strips - edge or shoulder	5.00	8.00	1.00		3.00		6.00	6.00	15.00	14.00	22.05
S-370 Sumter County	Rural Major Collector	Roadway	Rumble strips - edge or shoulder	10.00	14.00				1.00	6.00	8.00	16.00	23.00	-1.68
S-54 Jasper County	Rural Major Collector	Shoulder treatments	Widen shoulder - paved or other	11.00	15.00			4.00	1.00	6.00	6.00	21.00	22.00	-.81
S-362 Darlington County	Rural Major Collector	Roadway	Rumble strips - edge or shoulder	5.00	1.00					5.00	2.00	10.00	3.00	1.23

Compliance Assessment

What date was the State's current SHSP approved by the Governor or designated State representative?

03/10/2015

What are the years being covered by the current SHSP?

From: 2015 To: 2018

When does the State anticipate completing it's next SHSP update?

2020

Provide the current status (percent complete) of MIRE fundamental data elements collection efforts using the table below.

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
ROADWAY SEGMENT	Segment Identifier (12)	100	100					100	85	100	85
	Route Number (8)	100	100								
	Route/Street Name (9)	100	100								
	Federal Aid/Route Type (21)	100	100								
	Rural/Urban Designation (20)	100	100					100	85		
	Surface Type (23)	100	100					100	85		
	Begin Point Segment Descriptor (10)	100	100					100	85	100	85
	End Point Segment Descriptor (11)	100	100					100	85	100	85
	Segment Length (13)	100	100								
	Direction of Inventory (18)	100	100								
	Functional Class (19)	100	100					100	85	100	85
	Median Type (54)	100	100								
	Access Control (22)	100	100								

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	One/Two Way Operations (91)	100	100								
	Number of Through Lanes (31)	100	100					100	85		
	Average Annual Daily Traffic (79)	100	100					100	85		
	AADT Year (80)	100	100								
	Type of Governmental Ownership (4)	100	100					100	85	100	85
INTERSECTION	Unique Junction Identifier (120)			100	85						
	Location Identifier for Road 1 Crossing Point (122)			100	85						
	Location Identifier for Road 2 Crossing Point (123)			100	85						
	Intersection/Junction Geometry (126)										
	Intersection/Junction Traffic Control (131)										
	AADT for Each Intersecting Road (79)			100	100						
	AADT Year (80)			100	100						
	Unique Approach Identifier (139)			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178)					100	100				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
	Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
	Ramp Length (187)					100	100				

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Roadway Type at Beginning of Ramp Terminal (195)					100	100				
	Roadway Type at End Ramp Terminal (199)					100	100				
	Interchange Type (182)					100	100				
	Ramp AADT (191)					90	90				
	Year of Ramp AADT (192)					90	90				
	Functional Class (19)					100	100				
	Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):		**100.00**	**100.00**	**75.00**	**69.38**	**98.18**	**98.18**	**100.00**	**85.00**	**100.00**	**85.00**

*Based on Functional Classification

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

There 4 items we are currently missing:

- Unique Junction Identifier (120)
- Intersection/Junction Traffic Control (131)
- Unique Interchange Identifier (178)
- Interchange Type (182)

The software changes to accommodate these 4 items are scheduled to be completed by February 2020.

- The software will assign a unique Junction Identifier to each intersection, so item 120 should be completed by the 1st quarter of 2020.
- Once the software is in place, we plan to begin collecting the information for item 178 and 182 manually using ITMS and aerial imagery. It may take up to a year to get all of them entered, so the estimated completion date for items 178 and 182 is the 1st quarter of 2021.
- The software changes will also accommodate item 131, and data collection methods are currently being evaluated.

Did the State conduct an HSIP program assessment during the reporting period?

A gap analysis and assessment was conducted in 2017. Results and improvements from the gap analysis will be reported in the 2019 HSIP report.

Optional Attachments

Program Structure:

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average: means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).

Emphasis area: means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.

Highway safety improvement project: means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.

HMVMT: means hundred million vehicle miles traveled.

Non-infrastructure projects: are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.

Older driver special rule: applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.

Performance measure: means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.

Programmed funds: mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.

Roadway Functional Classification: means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.

Strategic Highway Safety Plan (SHSP): means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.

Systematic: refers to an approach where an agency deploys countermeasures at all locations across a system.

Systemic safety improvement: means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.

Transfer: means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.